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REMARKS/ARGUMENTS

Claims 1-13 are pending in this application.

Applicant appreciates the Examiner's indication that claims 3 and 8 would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims.

Claims 1, 2, 4-7 and 9-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Okumura (U.S. 5,370,300) in view of Helms et al. (U.S. 3,462,577). Applicant respectfully traverses the prior art rejection of claims 1, 2, 4-7 and 9-13.

Claim 1 recites:

"A resistance welding method for bonding a lead wire and a metal member to each other by resistance welding, comprising the steps of:
pressing the lead wire which is clamped by a first welding electrode so as to be in contact with the metal member;
providing a plurality of second welding electrodes; and
passing currents through the plurality of second welding electrodes in contact with the metal member from the first welding electrode via the lead wire and the metal member." (emphasis added)

Claim 5 recites features that are similar to the features recited in claim 1, including the emphasized features.

With the unique combination and arrangement of method steps and features recited in Applicant's claims 1 and 5, Applicant has been able to provide a resistance welding method and apparatus which prevents unevenly distributed current flow and achieves sufficient bonding strength, and which enables immediate removal of defective products from the manufacturing line by performing bonding strength inspection immediately after welding (see, for example, the first full paragraph on page 3 of the originally filed specification).

The Examiner alleged that Okumura teaches a resistance welding method for bonding a lead wire to a metal member including the steps of pressing a lead wire which is clamped by a first welding electrode, and an inspection lead-wire chuck clamp. The

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Examiner acknowledged that Okumura fails to teach or suggest a plurality of second electrodes, passing currents through the second welding electrodes, measuring and determining the currents, and current sensors. The Examiner further alleged that Helms et al. teaches a method of using two electrodes on both sides of the middle electrodes, with detectors to measure and determine the currents. Thus, the Examiner concluded that it would have been obvious to "have two additional electrodes, with detectors to measure and determine the current as taught by Helms [et al.], in Okumura. Applicant respectfully disagrees.

In contrast to the Examiner's allegations, Okumura is directed to a welding method that is entirely different from the present claimed invention. Particularly, Okumura teaches that a tip of a wire 5 is melted by a torch and pressed into contact with an electronic device 1. Elements 8a and 8b melt portions of the insulating coating of the wire so as to expose portions of the wire 5. The bonding tool 4 is then moved so as to come into contact with lead 3 to establish an electrical connection between the electronic device 1 and the lead 3.

As acknowledged by the Examiner, Okumura fails to teach or suggest the feature of "passing currents through the plurality of second welding electrodes in contact with the metal member from the first welding electrode via the lead wire and the metal member" as recited in claim 1, and similarly in claim 5.

In addition, contrary to the Examiner's allegations, Helms et al. fails to teach or suggest any lead wire that is clamped by any welding electrodes, and thus, certainly fails to teach or suggest the feature of "passing currents through the plurality of second welding electrodes in contact with the metal member from the first welding electrode via the lead wire and the metal member" as recited in Applicant's claim 1, and similarly in Applicant's claim 5. In fact, Helms et al. is directed to a method for welding two plate-shaped elements together, and has absolutely nothing at all to do with a method and apparatus for welding a lead wire to a metal member.

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Thus, contrary to the Examiner's allegations, the combination of Okumura and Helms et al. clearly fails to teach or suggest that any current is passed through any second welding electrodes from a first welding electrode via a lead wire, and certainly fails to teach or suggest the feature of "passing currents through the plurality of second welding electrodes in contact with the metal member from the first welding electrode via the lead wire and the metal member" as recited in Applicant's claim 1, and similarly in Applicant's claim 5.

Even assuming *arguendo* that Helms et al. taught or suggested the feature of "passing currents through the plurality of second welding electrodes in contact with the metal member from the first welding electrode via the lead wire and the metal member," there would have been absolutely no motivation to combine the teachings of Helms et al. with Okumura. Since the heating members 8a, 8b of Okumura are only used to melt portions of the insulating coating on the wire 5 so as to expose portions of the wire 5, and absolutely no current is ever passed through the wire 5 of Okumura by the heating members 8a, 8b or by any other element of Okumura, contrary to the Examiner's allegations, one of ordinary skill in the art certainly would not have been motivated to use two additional electrodes, with detectors to measure and determine the current, as allegedly taught by Helms, in the method and device of Okumura.

The Examiner is reminded that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. In re Geiger, 815 F.2d 686, 2 USPQ 1276, 1278 (Fed. Cir. 1987).

Accordingly, Applicant respectfully submits that Okumura and Helms et al., applied alone or in combination, fail to teach or suggest the unique combination and arrangement of method steps and features recited in Applicant's claims 1 and 5.

In view of the foregoing remarks, Applicant respectfully submits that claims 1 and 5 are allowable. Claims 2-4 and 6-13 depend upon claims 1 and 5, and are therefore allowable for at least the reasons that claims 1 and 5 are allowable.

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In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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